LEHI FIRE DEPARTMENT

Fully Involved

VOLUME XLVI JULY 2014

Chief Dale Ekins

INSIDE THIS ISSUE:

Bugle Notes	2
Foam Day 2014	3
Firefighter of the Quarter	4
Fire Marshal Message	5
Equipment Tips	7
Legacy of Service	8
Pre-Plan	9
Birthday's/ Announcements	10

DIFFERENT ROLES

As I have been watching the NBA playoffs recently, I noticed that the teams that usually come out on top have unique features that allow them to be successful. Not only do these teams have very talented and experienced athletes, but they have other members who support and augment the pool of talent. Without these "back up" players who help carry the load, these teams would not be the championship teams that they are.

In the book, "The 17 Indisputable Laws of Teamwork" by John C. Maxwell, there is a chapter titled "The Law of the Bench." "Every human being has value, and every player on the team adds value to the team in some way. Those truths alone should be enough to make team members care about the bench players.'' Maxwell lists 6 reasons to honor and develop the players that are not considered "starters."

The starters are described as the front line people who directly add value to the organization or who directly influence its course.

The bench is made up of the people who indirectly add value to the organization or who support the starters who do.

1) Today's Bench Players may be tomorrow's stars. All successful people go through a period of experience and learning. Joe Montana was on the bench in his first 2 years of professional football only to become a "Hall of Famer". By the way, his backup on the bench at the time was a player named Steve Young, also a "Hall of Famer."
2) The success of a supporting player can multiply the success of a starter.
3) There are more bench players than starters. From sports teams to the entertainment world, there are many more supporting players than starters and the success of the team is dependent on the whole team.
4) Starters and bench players correctly placed can be more valuable when placed into the game at key times. Look at Angie in our organization to see the value of her contributions to our team. She is invaluable to our success.
5) A strong bench gives the leader more options.
6) The bench is usually called on at critical times for the team. "The time you need the bench isn't when things are going well. It's when things aren't."

"The Law of the Bench" applies to our fire department and has many other applications. Think about our starters who are key to the success of our department in regards to leadership.

Now think about those who are key to moving our department forward.

Leaders set the tone with policies, guidelines and accountability, but the wheels of moving forward and doing the work lies with the crews.

Each one of our members has something unique to add to our organization. We have a few members that have remarkable skills to fix things and are very good with technical skills. There are those within our department that are very experienced with fires and Incident Command. We also have very talented and hardworking firefighters, Paramedics, and Advanced-EMT's. The bottom line is that we all have talents that are different and needed to make us function as a complete unit. My hope is that we recognize this, accept and encourage each to magnify their talents and skills. As we work on them we will come to realize hat we are not all the same, but we each have something to contribute. We can be and are one of the best fire departments in the state because our efforts are focused on our mission and vision to protect our citizens and their property with the skills that we unitedly have.

BROTHERHOOD

Captain Jake Beck

Shad Hatifeld called and asked me if I would mind writing an article for the current edition of the newsletter (this one). Early on since the inception of this newsletter we started out with a monthly section called "Bugle Notes". It was intended to focus on leadership or any other hot topic in the fire service. Shad specifically wanted something for the resurrected "Bugle Notes". I knew right off the bat that I would like to write a quick article on "Brotherhood". As usual, my brain did not shut off once I decided what my article would be on. I had a million thoughts going through my head. Is the brotherhood better now than when I started? Worse? How can I make it better?

Readers of the rest of the article will likely fall into one of three categories: Those who get it, those who don't care, and those who will inevitably make fun of it all. I encourage you to read and think about what YOU can do to improve our department's brotherhood. Stow the pointing fingers for a few minutes, keyboard pundits, and try to accept the challenge with a positive outlook–you may just achieve a positive outcome.

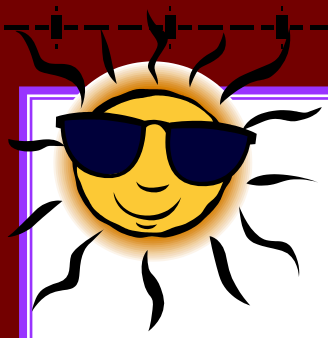
We enjoy the benefits of brotherhood, but many people have a hard time associating it with terms like "individual responsibility," "personal accountability," "servanthood," "stewardship," and "ethics." What do these expressions have to do with brotherhood? It does not just happen by accident. Being a part of this fire service brotherhood means more than getting free drinks or coffee at 7/11 just because of the cool uniform. Many brothers and sisters are more concerned about what they can get from the fire service versus what they can give. People are sometimes taunted for "going the extra mile," but why is going above and beyond not always a popular concept? Chief Alan Brunacini brought customer service principles to the fire service industry in the 1990's . Why did you join the service, if not to help people?

To really understand the brotherhood, one must realize that it is something much bigger than you. You belong to something elite, something special, yet something fragile. Every time one of us forgets that we represent something greater than ourselves, problems occur. When our people get caught doing something less-than-

honorable, it casts a shadow over the entire brotherhood. It takes away from the brotherhood. Conversely, in the few years following September 11, 2001, brotherhood was something so obvious you could almost breathe it in every fire department in every community. FDNY personnel displayed brotherhood for each other, for their community, and for the world. They put others before themselves because they knew it was bigger than them and we all benefitted. They earned the public's confidence. The impacts of our actions affect all of us in the future, whether positive or negative.

Brotherhood requires action. You have to make brotherhood, which takes work and commitment to imperfect people. You have to forgive things that happened years ago, and see others as more important than you. Pride is a great feeling in the context of brotherhood, but selfish pride is the antithesis of brotherhood. It is self-centered and it strips brotherhood from the individual and often from others around them. Stop pointing your finger at everyone else and start accepting your role in both the problem and the solution.

So, how do we do it? How do we build brotherhood? Be engaged, take action, and get involved. Be there for each other–it's that easy. Be there when a brother or sister needs you. Make yourself available when someone needs your time. Invest in each other. Build each other up instead of always tearing each other down. If we say we are willing to lay down our lives for each other in a fire, why don't we reflect that in the firehouse? Why must you berate a fellow firefighter behind his back for forgetting to take out the trash and bring conflict into the firehouse over similar petty issues? Those attitudes will transfer to the fire scene. Let the little things go. Ask yourself, "Will this matter to me in five years?" If not, let it go. Put in the work; it is worth it. Besides, we owe it to those who have gone before us and to the next generation to cement a legacy with a solid foundation of brotherhood. They will inherit tomorrow what we put into it today. Remember, your fire service heritage is the very fabric from which the brotherhood is cut. Are you being a good steward of our brotherhood? Would you be proud to have your son or daughter work for your department? If the answer is "no," then start making changes now. Whether you are a firefighter or fire chief, the answer to authentic brotherhood is in you.



Foam Day 2014

MARK YOUR CALENDARS IT'S ALMOST TIME FOR FOAM DAYS!!!

Thursday, July 24 at Lehi Sports Park (2000 West 700 South)

11:00-4:00 - Inflatables, Entertainment, and Vendors

1:00 -3:00 - Foam Sprays

3:00 -Free Watermelon

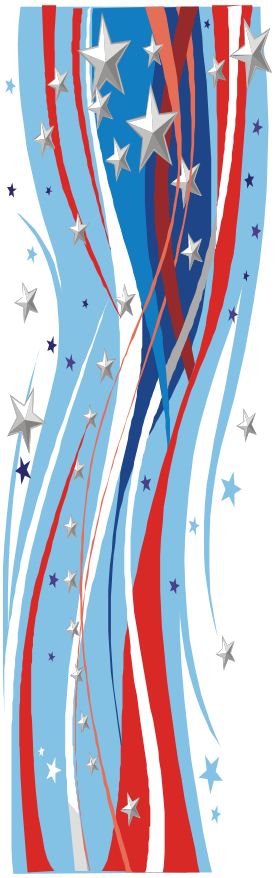
Captain Kim Beck

Firefighter of the Quarter

We are proud to present the name of Captain Kim Beck for Lehi's Firefighter of the Quarter. In his nomination memo, Fire Marshal Kerry Evans has this to say:

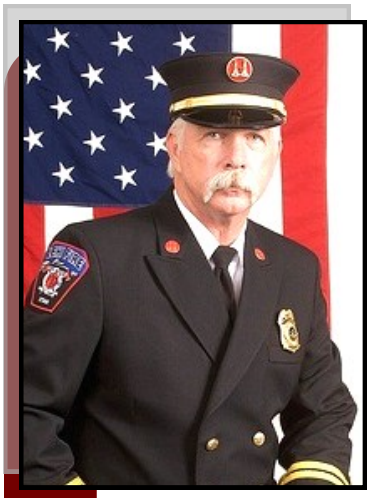
"For his continued efforts to keep track of and maintain all the fire department equipment and vehicles. This is an on going project that takes up a large amount of time while he is on duty while guiding his team and responding to calls as well as a good amount of time taking phone calls and arraigning vehicle maintenance while off duty."

Congratulations Kim for a well deserved award!



Fireworks Safety Tips

- Never allow **children** to play with or ignite fireworks.
- **Never** try to **re-light** or **pick up** fireworks that have not ignited fully.
- Keep a **bucket of water** or a **garden hose** handy in case of fire or other mishap.
- Make sure fireworks are **legal** in your area before buying or using them.
- Light fireworks **one at a time**, then **move back** quickly.



Fire Marshal
Kerry Evans

FIRE SUPPRESSION SYSTEMS
Part 1

The first recognized sprinkler system was installed in the Theatre Royal in the UK in 1812. From 1852 to 1885, perforated pipe systems were used in mills throughout New England for fire protection. The first automatic sprinkler system started around 1860. The current edition of the International Fire Code requires sprinkler systems in most commercial buildings and multi-family homes according to square footage and occupancy.

According to many sources automatic sprinklers are highly effective and reliable systems for fire protection. Sprinkler systems are carefully designed to activate early in a real fire when responding to heat not smoke, but are not designed to activate in non-fire situations. Each sprinkler reacts only to the fire conditions in its area. When water releases during a fire, it is generally much less than would occur if the fire department had to suppress the fire using one or two 1¾" hand lines.

The following describes the most common types of sprinkler system in our response area.

Wet Pipe Fire Sprinkler Systems: Wet pipe fire sprinklers are the most common type of fire sprinkler system in use. In a wet pipe fire sprinkler, the water is stored directly in the pipes and released by heat activated sprinkler heads. This type of fire sprinkler has the advantage of being able to activate instantly, with no lag time when the fire sprinkler head open. Contrary to popular belief not all heads operate at the same time, only the head closest to the heat source. (The most common sprinklered buildings in Lehi are wet pipe systems).

Dry Pipe Fire Sprinkler Systems: A dry pipe sprinkler system is one in which pipes are filled with pressurized air or nitrogen, rather than water. This air holds a remote valve, known as a dry pipe valve, in a closed position. Located in a heated space, the dry-pipe valve prevents water from entering the pipe until a fire causes one or more sprinklers to operate. Once this happens, the air escapes and the dry pipe valve releases. Water then enters the pipe, flowing through open sprinklers onto the fire. There should be a small air compressor nearby to keep the air pressure in the pipes to about 40 psi.

One advantage of using dry pipe fire sprinkler systems include:

- Dry pipe sprinkler systems provide automatic protection in spaces where freezing is possible. Typical dry pipe installations include unheated warehouses and attics, outside exposed loading docks and within commercial freezers.

Pre-Action Fire Sprinkler Systems: Pre-action fire sprinkler systems employ the basic concept of a dry pipe system in that water is not normally contained within the pipes. The difference, however, is that water is held from piping by an electrically operated valve, known as a pre-action valve. Valve operation is controlled by independent flame, heat, or smoke detection.

Two separate events must happen to initiate sprinkler discharge. First, the detection system must identify a developing fire and then open the pre-action valve. This allows water to flow into system piping, which effectively creates a wet pipe sprinkler system. Second, individual sprinkler heads must release to permit water flow

Into system piping, which effectively creates a wet pipe sprinkler system. Second, individual sprinkler heads must release to permit water flow onto the fire.

In some instances, the pre-action system may be set up with a double interlock in which pressurized air or nitrogen is added to system piping. The purpose of this feature is two-fold: first to monitor piping for leaks and second to hold water from system piping in the event of inadvertent detector operation. The most common application for this system type is in freezer warehouses.

Deluge System: A deluge system is similar to a pre-action system except the sprinkler heads are open and the pipe is not pressurized with air. Deluge systems are connected to a water supply through a deluge valve that is opened by the operation of a smoke or heat detection system. The detection system is installed in the same area as the sprinklers. When the detection system is activated water discharges through all of the sprinkler heads in the system. Deluge systems are used in places that are considered high hazard areas such as power plants, aircraft hangars and chemical storage or processing facilities. Deluge systems are needed where high velocity suppression is necessary to prevent fire spread. (IM Flash outside storage of Hazardous Materials is one example)

Antifreeze systems: Antifreeze loops protect areas in a building or outside a building that are prone to freezing. A check valve isolates the anti-freeze loop from the rest of the fire sprinkler system. There is also a main drain and a fill cup to assist in the draining and refilling of the loop. Antifreeze loops are filled with listed and approved factory premixed antifreeze solutions; either Propylene Glycol (PG) or Glycerin (GL).

Several incidents over the last few years have brought antifreeze into question of whether it's safe to use in residential settings. One person was killed (Truckee Ca.) and another severely burned (Herriman, Utah) when fire activated the sprinkler system and the antifreeze exploded into fiery droplets. A study of the MSDS reveals that both of these chemical solutions burn. The MSDS show that the flashpoint of propylene glycol is 210°F and ethylene glycol is 231°F and that glycerin, depending on the type of test, has a flash point between 320°F and 390°F.

When the mixture is diluted with water (in the form of a solution) the flammability of the mixture is reduced. Flashpoint, however, is not a reliable indication of the potential for ignition of a liquid when the liquid is divided into small droplets, as occurs when the antifreeze solution is discharged from a sprinkler. When in spray or mist form, combustible liquids have been found to ignite at temperatures less than their flashpoint. In new systems the premix listed solution of antifreeze was reduced to 48% glycerin and 38% propylene glycol during testing by NFPA to reduce the explosive factor. Lehi City has a lot of older antifreeze systems currently in use. These systems have higher percentages of antifreeze in them and may be prone to explosion if activated during a fire. When maintenance is performed on the older systems the old solution is removed and replaced with new premix solution.

…Continued till next newsletter we will discuss Clean Agent Suppression Systems

Tricks of the Trade

Thermal Imaging Camera

Firefighter Mike Stevens

I've been asked to review a piece of our equipment which I thought would be beneficial to our department. One of the first tools which came to mind was the Thermal Imaging Camera or TIC. I was fortunate in January to be able to go up to West Jordan with my crew and be involved in training with the TIC. How the TIC works is that it can detect or see emitted heat energy through smoke. They can also detect energy emitted through a door, walls, or ceiling, which may indicate fire or possible ignition. One thing to be aware of is that, TIC's can detect energy reflected off of water or mirrors, even though the heat may not actually be coming from those points.

TICs have many different uses on the fire ground. Here are just some of the things covered in the training I attended.

TIC's can be key tools used during initial attack. A fire on a lower floor may be spreading into the attic—a general sweep of the fire building with a TIC can quickly reveal this. And if there's only smoke showing from a fire building, a TIC can help pinpoint the seat of the fire, allowing initial attack to be more effective.

Size up: When looking for where the fire is located, operations officers can use TICs to observe a fire building from the exterior. For example, a hot roof may indicate an active attic fire. A TIC can also be used during fire suppressions from the Tower. By using it from the tower bucket you can direct it into heavy smoke which could reveal the seat of the fire making fire suppression more effective.

Downed/trapped victims or missing persons: When using a TIC, victims can easily be seen through smoke. This is especially important when rapid-intervention teams are searching for a downed/trapped firefighter. TIC's can detect the heat signature given off by a person's footprints, if the footprints were left fairly recently.

Electrical hotspots/overhaul: On the fire ground, TIC's can help identify overheating light ballasts or other electrical equipment/wiring, as well as hot spots in walls during smoke investigations or overhaul.

Hazmat incidents: TICs can be used to determine liquid levels or reactions in containers. If the TIC is pointed at a specific container, it can detect the temperature difference between the liquid and vapor levels inside. TIC's can also help find leaking gas/liquid containers, and help directly detect the location of vapor clouds. This peaked my interest when a few shifts after this training we had a call where we were dispatched out to a natural gas leak in a residence. Upon arriving at the home the RP stated they were hanging up a picture frame with a nail and hammer when they hit a gas line in the wall. You could hear the gas leaking out very rapidly. With the training fresh on my mind, I got the TIC from the engine and made a recording of what the TIC was picking up. (You can view the footage by clicking or checking out this link.) https://www.youtube.com/watch?v=yWTBzUCzRKU This ended up being a Freon leak from a line coming from their AC unit.

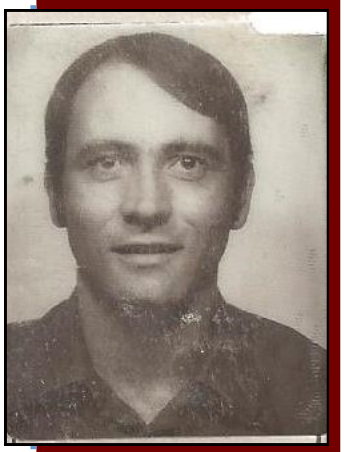
These are only a few of the benefits that the TIC offers us. It provides extremely valuable information to crews on the fire ground and can be a lifesaving resource, but remember they are just another tool in our toolbox. Meaning they can't and shouldn't completely replace a firefighter's senses. Firefighters must be trained to use their own eyes and ears to look for signs, such as increasing heat and warnings of structural failure or that a fire is becoming more dangerous. TIC's should be used as a tool that can aid a firefighter's already well-trained senses. We should also make sure to give our local Firehouse Subs a big thanks for donating two TIC's for our fire department.

A Legacy of Service

After an incredible 34 years of service with Lehi City Ambulance and Lehi Fire Department Randy Wells is hanging up his gear.

Randy became interested in emergency medical services after taking a CPR course. He pursued his interest and decided to become an emergency medical technician (EMT). In 1980, after becoming an EMT, he was hired by Lehi City to be a part of the Ambulance Service. Later, he went on to become certified as an EMT-Intermediate and then an EMT Advanced. During his time serving on the ambulance he held several positions. He was a Captain of an ambulance crew and he severed as the Lehi Ambulance Association President, Vice President, and Secretary. Shortly after becoming an EMT, Randy went on to become an EMT Instructor and then a Utah State Tester where he proctored many future EMT's. He also is certified through the American Heart Association as a Basic Life Support and Pediatric Advanced Life Support Instructor. In 2013 Randy accepted a job at Mountain Land Applied Technology College (MATC) as a Medical Director Liaison for the EMT program where he is a course coordinator.

Randy is one of the most caring people you will ever meet, anyone that knows him will agree. With that being one of his most predominant characteristics it's no surprise that he served on the State of Utah's Critical Incident Stress Debriefing Team. This is a team designed to help fellow responder's cope with difficult calls and situations they may have encountered.



The extent of his love of caring for patients did not stop at the level of an EMT Advanced. In 1998 Randy graduated from Salt Lake Community College with a degree in Nursing. He was hired by Intermountain Health Care and has been working for them ever since. He has worked everywhere from American Fork Hospital to LDS Hospital, and Intermountain Medical Center where he currently works as a Trauma Nurse.

In 1997 Randy certified as a firefighter and became a member of Lehi Fire Department. In 2005 he was a part of the first group of candidates to be hired as full time paid firefighter's. Previously, Lehi had a full time Fire Chief (Dale Ekins) and a full time Captain (Ricky Evans). In 2008 he was promoted to the rank of Engineer and held that position for the remainder of his career. Another highlight of his career was becoming a member of the North Utah County Technical Rescue Team which he was a part of for several years.

When the Lehi Ambulance Service and the Lehi Fire Department merged to become one entity, which is now the Lehi Fire Department, an association was formed. Randy took pride in being the elected Treasurer and always did a great job handling the finances. At this time he was also asked to be the department Chaplin.

Now that Randy has decided to call it quits with the fire department, it doesn't mean his time serving is over. Randy will continue his job as a nurse and he will continue to teach EMT students at MATC.

Randy, you will be missed!

Engineer Jeff Smith

Interstate 15 Hydrant Access Options

I would like to ask everyone a simple question. "How many times have you needed copious amounts of water for an incident while on the freeway?" While this may be an uncommon event, it's still a possibility in our city. When I began my career at Lehi Fire Department, I recall hearing about a few incidents where a relay or shuttle operation was needed on the freeway. I have been a part of a few incidents where we needed more than a single tank of water for extinguishment. The first incident was unique in that it involved a semi-trailer with multiple compacted vehicles being hauled to a scrap yard. One of the compacted vehicles had ignited and fire was spreading to the other vehicles. Another incident was a fully involved large recreational motor home. Engine 81 was assigned take a hydrant on Thanksgiving Way and assisted us with extinguishment. More recently, the Engine and Tower were involved in the extinguishment of a vehicle fire. The passenger car had a leaking fuel tank that kept the car ignited. Both units were low on tank water when it was finally extinguished. Other freeway incidents that I have heard discussed around the table were: semi-truck fires, propane truck leaking, heavy freight fires, and even the standard vehicle fire where water issues became a concern.

As a crew we wanted to know what available options we have on the freeway. After conducting a preplan, we were surprised by the availability of hydrants once an apparatus has committed to the freeway. Several of these hydrants are manageable enough for a single apparatus to establish their own water supply.

NORTHBOUND I-15 Starting at mile marker 278 to 287 the hydrant access is limited. In between each exit, you can access 1-2 hydrant locations along the frontage road or cul-de-sacs. Best access points are made at: Motel 6, near Sego Lilly Elementary, 300 and 600 W. Frontage Road, Railroad Street area, and Digital Drive. There are hydrants near the 284 off ramp at a business park, but be advised that using any relay operation the frontage road and off ramp will need to be shut down.

SOUTHBOUND I-15 Access points we discovered are at Mill Pond Drive, along 850 E. business access roads, 600 E. to 100 E., Trafalga Fun Center, various possibilities with State Street hydrants from 300 W. to 1200 W., and along Thanksgiving Way after 1200 W. to XSI Factory.

The best way for crews to find these hydrants is to become familiar with their area and determine what the logistics would be for these hydrant locations. Outside of these locations you should consider calling for additional resources for relay or shuttling operations. I hope this information will prepare crews for a successful freeway operation.

Utah State Fireman's Association Convention 2016

We are pleased to announce that Lehi City Fire Department has been selected to host the Utah State Fireman's convention in June 2016. More information to follow.

Utah State Firemen's Association

Birthday's

May

* Ernie Curwen - May 5th
* Brandon Howard - May 20th
* Ryan Kimball - May 20th
* Russ Ferre - May 22nd
* Jeff Smith - May 23rd
* Ricky Evans - May 27th

June

* Darren Wright - June 6th
* Brady Cragun - June 20th
* Jon Tills - June 21st

July

* Brett Fraser - July 1st
* Robert Morley - July 6th
* Ryan Orr - July 9th
* Chris Trevino - July 11th
* Robert Stanley - July 15th
* Shad Hatfield - July 21st
* Kim Beck - July 22nd
* Cory Taylor - July 29th

Announcement's

New Baby's

- Firefighter Stephen Johnson and his wife Brittney welcomed a new baby girl, Blakely Brynn Johnson, on April 14, 2014. Congratulation to the Johnson Family!

Weddings

- Congratulation to Firefighter Patrick Cullen and his Bride Rachel. They were married on May 9, 2014. Congrats you two!

- On June 27, 2014 Firefighter Dallas Lyman married his beautiful bride - Cami. Congratulation you two!

- The newest newly wed goes to Firefighter Cody Whatcott and his bride Talia. They were married on June 28, 2014. Congratulations!

Promotions

- Congratulation to Trent Stanley who has just recently been promoted to Engineer. Trent will be the Engineer assigned to 81 C-shift.

New Hire's

- We just recently finished our interview process for two full time positions. We would like to present to you two of our newest full time members:
  * **Brady Cragun**
  * **Sam Ashman**

  Congratulations Brady and Sam!